

DO DEMONSTRATION LESSONS WORK?



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As part of a large research and professional development project funded by the Catholic Education Office Melbourne (CEOM), called *Contemporary Teaching and Learning of Mathematics*, the ACU team has been leading demonstration lessons. There is certainly not universal agreement on the worth of demonstration lessons in the mathematics education community. Concerns expressed include the risk of demonstration lessons providing an exemplary model to which many teachers feel they can never aspire, the demonstration teacher not “knowing” the students, and that the equivalent time spent observing the regular class teacher might be more beneficial.

On the other hand, the ACU team has found that the demonstration lesson provides an excellent focus for observation and subsequent discussion. The teaching and learning experience can be discussed frankly in a way that is not threatening to the regular classroom teacher, if sometimes a little threatening to the ACU team member, who is very much in the spotlight! A demonstration lesson provides the chance to show what is possible—an appropriate response to the frequent comment, “But that would never work with my students.” It is also likely that few teachers would be happy to teach while up to 12 other adults are in the room, but our process enables a large number of teachers to participate in a joint experience. We also believe that teaching a demonstration lesson

shows that we are prepared to be *risk takers* in the way we encourage both teachers and students to be, and this adds credibility and ‘grounding’ to the kinds of things we do and say in professional learning sessions.

In reading the literature on demonstration lessons, teachers indicated that “the modelling, observation, and debriefing were the most valuable components” of professional learning programs (Butler, Lauscher, Jarvis-Sellinger & Beckingham, 2004, p. 447). Ideally, demonstration lessons occur several times for a given group of teachers and usually have a particular focus as determined by the program or by the teacher. Our process is as follows:

- We organise to teach three lessons in a day at the school, with grade levels and content negotiated with teachers via the School Mathematics Leader (SML).
- We meet with all teachers who are going to be observing one or more lessons before school for a 20-minute briefing. During this time, we outline what we are planning to teach, the mathematical focus, and the major tasks and activities in which the students will be engaged. Teachers are invited to ask any questions. We then ask the teachers to complete the first question on our provided proforma, which asks, “What are you hoping to observe?”
- We teach the lessons with typically four to eight teachers observing. Teachers are encouraged to make notes on their observations for later sharing. One ACU

teacher takes the lead with each lesson, with the other one taking photographs. We often use the photographs as the basis of parent information evenings, where they give a powerful image of how the mathematics classroom may have changed since the parents were students.

- We have a 15-minute debrief, where teachers report on what they have observed in relation to both their chosen observation focus and other things which they have noticed. Later on in the day, the SML and other members of the school mathematics leadership team meet with the CEOM's School Advisers Mathematics (SAMs) to discuss issues that have arisen during the day, and which are likely to lead to productive follow-up.

We have noticed that, when given no direction as to what they might observe, observers choose largely to focus on *what the teacher does* rather than on student learning, thinking and understanding. We have also found that the most common areas which teachers have identified so far as their intended observation foci are questioning (e.g., “when to hold back and when to probe”), *engaging students* (“how reluctant mathematicians are drawn in”), *meeting the needs of a range of “abilities”* (“to see how all children can be challenged”), and *the lesson structure* (“the sequence of the lesson—when and how the teaching happens”).

Questioning is a very common point of discussion. We have noticed that teachers have commented on issues such as: giving considerable wait time for students to share their thinking; surprising responses when the ACU teachers calls on students who the regular classroom teacher would not normally; asking a child who has provided an incorrect answer to explain their thinking (compared to immediately moving on to another child); the kind of language we use to help children articulate their thinking; and pushing children beyond “I just knew it”.

One thing we have enjoyed doing is looking at teachers' written responses to the following question, completed after the debrief: “Is



there anything that occurred today that you believe might contribute to a change in your teaching? If so, can you please describe the intended change?”

Sample responses include:

- Give a greater focus to mathematical language.
- Questioning and delving deeper into children's thinking.
- Not feeling the pressure to teach too much in one lesson.
- Keep asking, “Why?”
- It's okay to put a child on the spot—all children are responsible for contributing.
- Use simpler tasks with more solutions.
- Being able to stand back and let the children explore the task before intervening.

Although it is early days in our research study on demonstration lessons, we believe that the experience is proving quite worthwhile for all involved. As an ACU team, it has been an interesting process to reflect on why *we* do what we do, when teachers notice things about our teaching of which we were not previously aware.

Readers may wish to write to the editors, sharing their own experience of demonstration lessons, including benefits and disadvantages as they perceive them.

Reference

- Butler, D. L., Lauscher, H. N., Jarvis-Selinger, S., & Beckingham, B. (2004). Collaboration and self regulation in teachers' professional development. *Teaching and Teacher Education*, 20, 435–455.